



Key terms	Definition
<b>Data</b>	Information in raw or unorganised form (such as alphabets, numbers, or symbols) that refers to, or represents, conditions, ideas, or objects. Or it can be... facts and statistics collected together for reference or analysis.
<b>Internet</b>	The internet is a global network of computers. All computer devices (including PCs, laptops, games consoles and smartphones) that are connected to the internet form part of this network.
<b>Big Data</b>	Is used to spot patterns and trends.
<b>Public (when referred to as public data)</b>	means that the data can be shared with organisations like your school, doctors, the police, banks, and companies such as Amazon or Facebook
<b>GDPR (General Data Protection Regulation)</b>	The General Data Protection Regulation (GDPR) is a law designed to protect personal data stored on computers or in an organised paper filing system.
<b>Computer Misuse Act</b>	The Computer Misuse Act protects personal data held by organisations from unauthorised access and modification).

### Where does data come from?

Private data  
Personal data  
Sensitive data  
non-sensitive data

### The Three Vs

Volume - how MUCH data  
Velocity - how FAST do we receive it  
Variety - what TYPES are there

### Privacy

Privacy is a person's right to be left alone, or to keep their personal matters and relationships secret.

Who collects data?	Why do they collect data?
<b>Government</b>	Collect data to <b>enable them to make decisions</b> on what is best for the local and national population
<b>Business</b>	Collect data to help them find out what people want
<b>Charities</b>	Collect data to help them campaign on a particular issue, target their fundraising, and/or measure how well they are achieving their aims
<b>Scientific research</b>	Data can be used to prove or disprove a study

### Computer Misuse Act – The law protects you from:

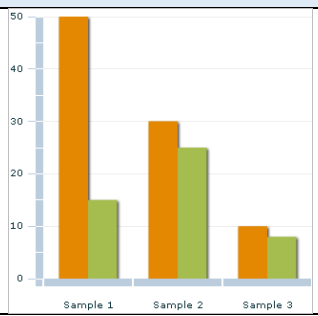
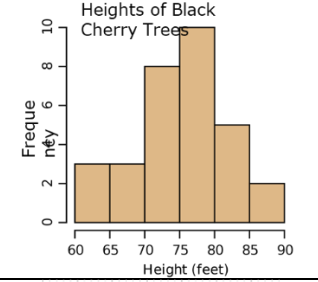
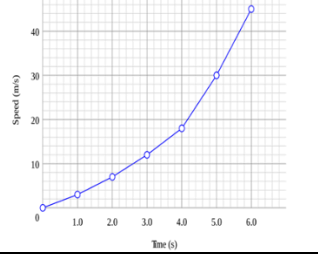
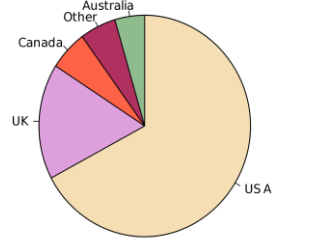
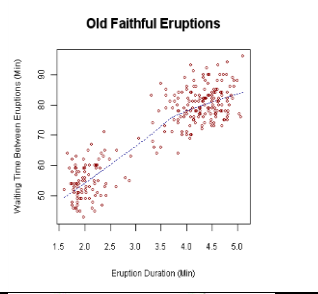

1. Unauthorised access to computer material. This refers to entering a computer system without permission (hacking)
2. Unauthorised access to computer materials with intent to commit a further crime. This refers to entering a computer system to steal data or destroy a device or network (such as planting a **virus**)
3. Unauthorised modification of data. This refers to modifying or deleting data, and also covers the introduction of **malware** or **spyware** onto a computer (electronic vandalism and theft of information)
4. Making, supplying or obtaining anything which can be used in computer misuse offences

### The Internet of things (IoT)

refers to smart products. However it describes the physical objects—"things"—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet. For example, Smart Security, smart speakers, smart thermostats and smart lighting.





Ways to visualise data	Example
Bar Graph	
Histogram	
Line Graph	
Pie Chart	
Scatter plot	
Word Cloud	

**Sensors:** A device that detects and responds to some type of input from the physical environment.

**Interconnectivity:** The state of being connected to one or more other things.

**Neural network:** A machine learning model based on the human brain, in which interconnected “neurons” work together to recognise patterns, solve problems and make decisions.

**Machine Learning:** A technology that allows computers to perform specific tasks intelligently, by learning from examples

**Decision tree:** A machine learning model that learns to predict outputs by answering a series of simple questions

**Artificial Intelligence:** Any task, effort or action carried out by a machine or a computer that could be associated with human intelligence.

**Turing Test:** A test of a machine's ability to exhibit intelligent behaviour equivalent to, or indistinguishable from, that of a human.

**Encryption:** A process that encodes data so that it can be only be read by authorised people. It scrambles the data and makes it unreadable.

**Cipher:** An algorithm for performing encryption

**Key:** A piece of information needed to transform data into code and back again.